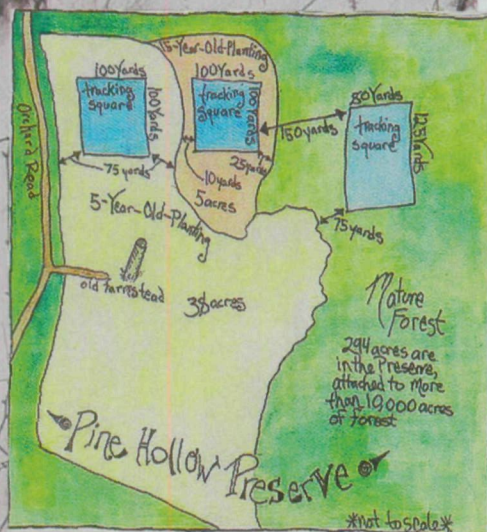


TRACKING

One teen counts the number of animal prints in the snow to see how reforestation benefits local mammal populations



TEEN TRACKER:
Maia Persche
hunts for
mammal tracks
in the snowy
Pine Hollow
Preserve (see
map, inset).

When 16-year-old Maia Persche needed an idea for a science project, she turned to her own backyard. Maia lives near Baraboo Hills, a large tract of upland forest in southern Wisconsin. Early settlers cut down much of the forest for farmland. But since the 1960s, The Nature Conservancy and local environmentalists have been working to restore the forest and protect songbirds, which rely on the habitat for nesting.

These reforestation projects seem to have helped bird populations, but what about other critters? To find out, Maia chose to study the forest's mammals for her science project. "I was interested to see how mammals would

Eastern
cottontail rabbit
tracks



webextra

Go online to view Maia's data and
use it to make your own graph:
www.scholastic.com/scienceworld

FOREST ANIMALS

respond to their habitat changing," she says.

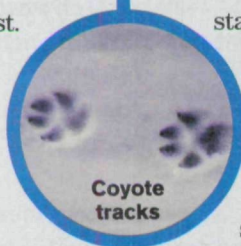
GROWING STAGES

Before Maia could begin her fieldwork, she researched locations for studying the animals. She came across a 1.4 square kilometer (337 acre) preserve called Pine Hollow.

This piece of land would work well for her project because it contains three distinct types of forest.

Pine Hollow has two reforested areas of different ages. One area was replanted 15 years ago, and the other was replanted four years ago. There's also an area of mature, undisturbed woodland that would serve as Maia's **control**. These three stages of tree growth would help Maia determine which kind of forest the mammals liked best. She suspected that the most mammals would be found in the mature forest and the fewest in the youngest four-year-old planting.

Maia drew a map of Pine Hollow. She outlined a 91-by-91 meter (100-by-100 yard) square within each habitat (see map, left). Within one to three days of each snowfall last winter, Maia would trek to Pine Hollow and visit each test site to see which animals, if any, might have passed through. She then recorded the number and species of each mammal whose tracks she found in the snow. To learn how to identify the various animal tracks, Maia read many books and studied field



Coyote tracks

guides. "Most of the time I was lucky because after the snowfall, it would stay so cold that the tracks would be in good shape," she says.

DATA COLLECTION

During the six tracking sessions she conducted last winter, Maia discovered a total of 13 mammal species in the three forests of Pine Hollow. She found small mammals (mice, voles, and shrews), medium-size mammals (gray and red squirrels, least and long-tailed weasels, rabbits, skunks, and opossums), and large mammals (white-tailed deer and coyotes).

Maia had to stay organized and keep track of all these **variables**. So, she recorded her **data** in a table that showed the total number of small, medium, and large mammal species whose tracks she found in each area. She then used the information in her table to create a bar graph. In her graph, the *x*-axis displayed the **independent variable**, which were the three different types of forests she tested. The *y*-axis showed the total number of different-size mammal species, which was the **dependent variable**.

FURRY FINDINGS

Maia's results supported her **hypothesis** that the most mammal species visit the mature forest. Tracks from all 13 species were found in the mature forest, while tracks from four animals—raccoons, long-tailed weasels, and gray and red squirrels—were not found in either of the two younger habitats.

Maia's **conclusion** was that mature forests are more valuable to animals. But even new forests have furry residents, showing that replanting efforts slowly provide new homes for forest critters. For her well-designed experiment and organized results, Maia won a Young Naturalist Award from the American Museum of Natural History. ❁

—Sara Goudarzi



White-tailed deer tracks



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